

97-84098-17

Life Extension Institute

Addresses...banquet of the
Life Extension Institute

[S.I.]

1919

97-84098-17

MASTER NEGATIVE #

COLUMBIA UNIVERSITY LIBRARIES
PRESERVATION DIVISION

BIBLIOGRAPHIC MICROFORM TARGET

ORIGINAL MATERIAL AS FILMED - EXISTING BIBLIOGRAPHIC RECORD

308	Life extension institute.
Z	
Box 113	Addresses at the banquet of the Life extension institute, Union league club, New York, N. Y., December 3rd, 1919.
	36, [2] p. 22 $\frac{1}{2}$ cm.
	Half title.

ONLY ED

RESTRICTIONS ON USE: Reproductions may not be made without permission from Columbia University Libraries.

TECHNICAL MICROFORM DATA

FILM SIZE: 35mm

REDUCTION RATIO: 11:1

IMAGE PLACEMENT: IA IIA IB IIB

DATE FILMED: 5/27/97

INITIALS: TLM

TRACKING # : 22447

FILMED BY PRESERVATION RESOURCES, BETHLEHEM, PA.

Gift of the President

308

Z

312 712

A D D R E S S E S

at the Banquet of

The Life Extension Institute

U N I O N L E A G U E C L U B

New York, N. Y.

December 3rd, 1919

Those Present at the Banquet
of
The Life Extension Institute
held at

THE UNION LEAGUE CLUB

New York City

December 3rd, 1919

TOASTMASTER

Hon. WILLIAM H. TAFT, *Chairman of the Board*

OFFICERS AND DIRECTORS

Prof. IRVING FISHER, *Chairman Hygiene Reference Board*

EUGENE LYMAN FISK, M.D., *Medical Director*

HAROLD A. LEY, *President*

JAMES D. LENNEHAN, *Secretary*

HENRY H. BOWMAN
ROBERT W. DEFOREST
EDWARD L. PIERCE

GUEST LIST

Members of the Hygiene Reference Board

Dr. John F. Anderson
Mr. John B. Andrews
Dr. A. D. Blackader
Dr. L. Duncan Bulkley
Dr. Thomas A. Darlington
Mr. Charles B. Davenport
Dr. George J. Fisher
Dr. Alfred C. Fones
Dr. John S. Fulton
Dr. S. S. Goldwater
Dr. J. H. Kellogg
Dr. S. A. Knopf

Prof. E. V. McCollum
Dr. J. N. McCormack
Dr. R. Tait McKenzie
Dr. W. S. Rankin
Dr. Mazyck P. Ravenel
Prof. Leo F. Rettger
Mr. Wm. Jay Schieffelin
Dr. Wm. F. Snow
Mr. Lawrence Veiller
Prof. C. E. A. Winslow
Dr. Francis Carter Wood
Dr. George H. Wright

Dr. Hugh H. Young

Members of the Executive and Medical Staff

Mr. S. M. Beattie
Mr. Frank Butler
Dr. J. R. Crawford
Dr. Martin Edwards

Dr. Frank H. Carber
Dr. A. K. Detwiller
Dr. C. T. Sharpe
Dr. K. B. Steele

Stockholders

Mr. Edwin L. Gardner
Mr. Horace A. Moses

Mr. Isaac Sprague
Mr. William M. Stevenson

Addresses at the Banquet of
The Life Extension Institute

Union League Club, New York

December 3rd, 1919

WILLIAM HOWARD TAFT, Toastmaster.

THE TOASTMASTER: Gentlemen, we are gathered here to-night to learn something about the Life Extension Institute. We have all the officers of the Institute here to make explanations and we begin with the man who knows the least about it, but whose function is that which he is now performing, that of a very ornate figurehead. (Laughter.)

I find that this function is something more than formal this evening, for the head of the Hygiene Reference Board has put upon me a burden far greater than that of using the hand and the knife in a capital operation. (Laughter.) It is that of keeping speakers within a very short limit of time.

I have known men of various degrees of moral character in a long experience, but I have rarely met a man who, with any capacity for speech at all, regards it as a moral obligation to keep a promise to speak within five minutes. (Laughter.) It is possible that the medical profession differs from other professions with which I am more familiar, but even doctors, when they begin to talk, I find like time.

Now Professor Fisher has put to me the task of getting through before morning, and I am going to do it. He has not given me a gavel and I have not a bottle. (Laughter.) I intend to make it known if a speaker overruns the time which is allotted to him and that time has been handed to me here marked upon a paper.

Mr. Harold A. Ley is the President of the Institute. He, Professor Fisher and Dr. Fisk, are the men who have made it. He has had to go down into the valley and shadow of deficit and then pull himself out of it and he knows as much about the seamy side of the Life Extension Institute as anybody, and he is here for the purpose of telling you his experiences and something of the practical machinery which has been used in the Life Extension Institute and which is now operating with a considerable degree of smoothness.

I will call on Mr. Ley. (Applause.)

ADDRESS OF MR. HAROLD A. LEY.

Mr. Toastmaster, gentlemen:—

Your officers have invited you here this evening to tell you what we have been able to accomplish with the money and names you entrusted to our care about six years ago.

It is with the deepest regret that I have to admit that we have been unable to pay a cent of dividends to the stockholders up to date.

Toastmaster: "This meeting is a dividend." (applause)

I hope at the next dinner, which I trust will be an annual affair, that I will have something different to report.

I first would like to take the time to explain to the members of the Hygiene Reference Board just how this Institute was organized. The idea started in 1909, when I agreed to take out more insurance with an insurance agent and he suggested that before filling out my application I have an examination, stating that if the examination was all right it would go into an application and the insurance company would pay for it. If it disclosed anything wrong I could pay for it myself and I would not go on the books as having been declined.

As I happened to have \$55,000 insurance in his company it seemed to me that they ought to be willing to pay \$5 to find out whether I was all right or not and I wondered what I was worth to them alive. I figured that if this examination would preserve my life one year, they would not only save the interest on \$55,000, which at 5% would amount to \$2,750, but they would also get an additional premium out of me of a couple of thousand dollars, which would show a saving of \$4,750 for a \$5 investment. This looked to me like good business. I had spent eight years of my life in the Actuarial Department of an insurance company, so I was somewhat familiar with the insurance business. The more I thought it over the more I was convinced that the insurance companies were losing an opportunity and as I was thinking about it one day it occurred to me that the same examination I had for one company would be just as valuable for all the other companies in which I held insurance. It also occurred to me that if this work was to be done it ought to be done by one organization for all the insurance companies.

About this time I saw an editorial in the Springfield Republican commenting on an address which Professor Fisher had given before the Life Insurance Presidents on periodic examinations. The next time I was in New Haven I telephoned Professor Fisher and told him that I had something which I thought would interest him. He told me that he was very busy and I told him I could tell him in five minutes what I had in mind. He said that if I wouldn't take any longer to come up and see him. (Laughter.) After I had been there fifteen or twenty minutes he asked me to take a little more time

(Toastmaster): "I told you" (laughter).

to answer his questions as the proposition interested him. The result was that I spent the whole afternoon with him and he told me the history of what had been accomplished along this line up to that time. He seemed so interested that I asked him if I organized a company would he become

a Director and he said, "No—that he could not afford to be identified with a commercial institution." Not knowing any other way to handle a question of this kind I let the matter drop but continued the acquaintance with Professor Fisher until the spring of 1913, when I went to him again and told him that I had made up my mind that there was need for an institute such as we had been talking of and I had made up my mind to go ahead and organize such a company.

In the meantime I had talked with a great many business men and some insurance officials and not one had been able to show me why the thing was not practicable. I told Professor Fisher that I would rather have him interested in the company than anyone else I knew but as long as he had told me why he could not be I thought he might suggest some men who might be interested. He told me he had given a great deal of thought to my proposition and if I was satisfied I could raise the money he would become a Director of the Institute and would like to organize the Hygiene Reference Board and started in to name some of the men he thought he could interest and named many of the men who are now on our Hygiene Reference Board. He was, however, very emphatic that he thought an institution such as we were discussing should not be simply a commercial organization. He thought the men he wanted to interest in the proposition would not be interested if it was simply a commercial organization. I knew nothing about raising money for any other kind of an organization and we finally worked out our problem by arranging to give to the men who put up the money a 5% preferred stock and 1/3 common stock. The other 2/3 of the common stock was to be put into the hands of trustees, the income of which was to be used for public health work. This is a unique organization in this respect and I know of no other organization like it where the problem has been worked out along these lines.

I went back to Springfield, my home town, and was able to get together a group of men who thought they would be interested in a proposition of this kind and had Professor Fisher come up and meet them. He was evidently satisfied that the money could be raised and he went to work in the spring and early summer of 1913, and interested several medical men, so that by the first of June of that year we were satisfied that there was a good deal of interest among medical men in a movement of this kind. It was about this time that Professor Fisher suggested that Mr. Taft would be interested in such a movement and asked him if he would become a Director. He found Mr. Taft very much interested and he agreed to take the matter under consideration as he was just leaving for Canada upon his vacation. About two weeks later he received a letter from Mr. Taft stating that he would go as far as Professor Fisher would.

I spent the summer and early fall in interesting some of the financial men in New York in the proposition and in October of that year Mr. Taft issued an invitation to the presidents of the five largest insurance companies to attend a dinner to discuss whether it was wise to start a company of this kind with the idea of prolonging the lives of policyholders. We had Mr. Day of the Equitable, Mr. Darwin Kingsley of the New York Life, Mr. Haley Fiske of the Metropolitan, Mr. Dryden of the Pru-

dential, and Dr. White of the Mutual, besides Mr. Sabin of the Guaranty Trust Co., Mr. Vanderlip of the National City Bank, Mr. Davison of Morgan & Company, General Gorgas, Mr. Taft, Professor Fisher and myself at the dinner. As a result of that dinner Mr. Haley Fiske of the Metropolitan agreed to give us a contract as soon as we were organized.

We started in then to complete the financial arrangements, which consisted in our issuing \$200,000 preferred stock and \$600,000 of common. We sold \$125,000 of the preferred and I thought we had ample money to launch the company. I could not see then how it was going to take anywhere near that amount of money to put the company on its feet. Future events showed what a poor guesser I was.

We started business in February, 1914, with Mr. E. E. Rittenhouse as President, Dr. Fisk as Medical Director and Mr. Lennehan as Secretary and Mr. Taft as Chairman. We had our contract with the Metropolitan and had only got started when we received a contract from the Guaranty Trust Company to examine their employees. Mr. Sabin had come to the conclusion that as long as he was paying his employees for lost time due to sickness and was also paying pensions that they ought to do what they could to keep themselves physically fit. This opened up an entirely new branch of business. We were able to go out and interest Mr. Ford to give this new service to 1,000 of his employees and also we were able to interest one or two of the other insurance companies in offering this service. Things looked very bright for us when the World War struck us, as you know, in July, 1914.

There were a good many times during the first two years when I was tempted to return the money to the men we had interested and call the whole thing off. I did not see how I could do justice to men like Mr. Taft, Professor Fisher, Mr. de Forest and the others who had allowed us to use their names and I could not bear to think of having their names identified with a failure, so we stuck it out.

At that time we charged \$3 for our insurance examination, \$3 for our industrial service and \$5 for the individual service. We now get \$4 for Insurance, \$6 for Industrial and \$15 for Individual Service. We had also branched out into doing a laboratory business. We bought out two existing laboratories and combined them with our own laboratory work. This all took money but it looked to us like a wise thing to do.

At the end of the second year we effected certain economies in our overhead. Mr. Rittenhouse retired from the Presidency and we made up our minds that the only positive way we could educate the public was to start in advertising and to charge enough for our service so that we

could afford to pay for the ads. We therefore advertised a new individual service and charged \$10. You will see from the results that I will read later that this was the wisest move we have ever made.

Before quoting any figures I want to say a word or two in regard to my associates. Dr. Fisk has been a tower of strength on the medical end of the work. He had a very high ideal of the medical profession from the start and has insisted on our living up to that ideal. The doctor insisted that we lean over backwards in doing things ethically and I don't believe any member of the Hygiene Reference Board need have the slightest fear of the Institute doing anything unethical as long as Dr. Fisk is in charge of our medical work.

Mr. Lennehan, our Secretary, had charge of the business end and especially of the development and handling of the individual business. You will see from the figures which I quote later that our position to-day is due mostly to the success of this branch of our work and Mr. Lennehan is entitled to the success due to the way he has handled the advertising and follow-up letters of this end of our work.

Professor Fisher, while not actively interested in the Institute, has given unstintingly of his time and energy and if the Institute makes the success which I expect it will, there will be no one who will be entitled to the credit for its success as much as the Chairman of our Hygiene Reference Board.

The hardest job, I think, is to find some way to express my gratitude to Mr. Taft, Chairman of our Board and for what he has done for the Institute. I know I am expressing the thoughts of every man here that there is no American who has given such a wonderful example of "doing his duty" as he has. Of all the things which he has done there is nothing which impressed me anymore than when I read of the time he was taken sick out in that little Missouri town a year ago last summer, where he was travelling through the heat, dirt and dust simply to explain to the people what the League meant. Any man who will do that after he has had all the honors that the American people can give him is some man.

As I said before, there were times when I would have been glad to have stood the loss and quit, but when you get men like Mr. Taft, Mr. de Forest, and the other men in a proposition of this kind you have got to see it through for they don't quit.

The last 12 months showed a business of more than \$300,000, with prospects of closing the year with a substantial profit. The five years of the Institute's work showed heavy but decreasing financial loss.

I think one of the things which kept up my courage all during this period was a statement made to me one time by Mr. Haley Fiske of the Metropolitan, that it took them five years, at a cost of \$500,000, before they were able to make any money. I believe we have as great a future as the Metropolitan has.

Now as to future. We ought to have a branch office in every city of 25,000 inhabitants in this country. I hope this next year to see branch offices established in five or six of the largest centers, like Boston, Philadelphia, Chicago, Pittsburgh, Detroit and Cleveland. I estimate that it will cost \$25,000 to equip an office, putting in examining rooms, X-ray, etc., and to stand the loss until they are self-sustaining.

Just a word more in regard to a new service that we are developing in the industrial field. I think we are on the track of one of the most important things we can do and that is to combine our service with group life and group health insurance in industrial plants where the men pay half the expenses and the employer pays half and where the entire transaction is handled by the officers of the Mutual Aid Society. I think this has tremendous possibilities.

I believe our standing in the insurance field is much stronger to-day than it has ever been. I think the insurance companies have had so many troubles of their own during the war and the Flu, that they would not want to take on anything new of a radical nature, but we see all kinds of signs from insurance companies that they are getting interested in this work among their policyholders. (Applause.)

THE TOASTMASTER: It shows how close we came to our contract in the Life Extension Institute. He only ran over three minutes (Laughter.)

The next gentleman I am going to call upon I think you all know. If you do not, and you are in any way likely to be useful to the Life Extension Institute, you will know him. His name is Irving Fisher. (Applause.)

He is a quiet, soft spoken, sweet-tempered, mild mannered man. He is a man who differs with you in as pleasing a way as any man I know of. (Laughter.) He is a man who usually differs with you. (Laughter.) He is a man who comes to you because he wants something, something done, not for himself but for some good object. You speak to him and you feel—you know there is no limitation on the Toastmaster (laughter)—you speak to him and you feel that the thing is over and he retires,

but in the course of three or four days somehow you run across him again and quietly the subject is brought up again and after awhile, after a number of visits, you find yourself yielding to him just to get rid of him. (Laughter.)

I have heard the comparison applied to other people but I think it better suits him than anyone I know, that of these ferryboats in New York. You come in on a great big ferryboat and it hits the side of the slip. The side yields back and everything seems to be going, and after awhile it recovers itself and the boat, large as it is, great as its momentum is, is quietly thrown to the other side and it strikes the other side and that yields. It yields in a very gentlemanly way (laughter), but after awhile, with the two sides yielding as they are, the boat is put with its bow right up into the slip. Now that is Irving Fisher, whom I have great pleasure in introducing. (Laughter and applause.)

ADDRESS OF IRVING FISHER.

Mr. Toastmaster, gentlemen: Mr. Ley has told you about the business end of this Institute. Apparently the time limit of five minutes has rankled in his mind ever since he first communicated with me. I think that both of us have changed our points of view very much since that time. I know I have, because I have found that depending on charity for hygienic work is not sufficient and that a mixture of the commercial element is necessary to get results and therefore justifies that connection between business and philanthropy which we have in a unique way in the Life Extension Institute.

On the other hand, Mr. Ley I am sure has ceased to think of the Life Extension Institute as a moneymaking machine and has come to regard it as I do, and I think you do, as one of the greatest engines for human betterment that we have.

He began his remarks by saying that as yet there have been no dividends. The Chairman has said this meeting is a dividend. I would point out that the great dividends are the saving of human lives. That is all I am interested in. I have never been a stockholder of the Institute, not because I objected on principle, but because of my close association with the medical profession and the traditional medical ethics in regard to these matters, I felt that you men on the Hygiene Reference Board would be more willing unstintingly to give your efforts if you were sure I had no commercial interest myself.

Nevertheless I have come more and more to believe that the basis on which this Institute was founded, by which it is, or will be ultimately, a self-supporting institution, is correct.

The idea of a Life Extension Institute is to extend human lives, and it is based on the postulate that human life is extensible. It used to be supposed that the law of mortality is fixed, but we now know that the law of mortality is very much what we make it. We find that this so-called law differs in places. We find for instance that the mortality in India is double what it is here. We find also that mortality now is less than it used to be. The average duration of life increased during the 17th and 18th centuries four years per century. During the first three quarters of the 19th century it increased at the rate of nine years per century, and latterly it has increased at the rate of seventeen years per century, and in some parts of Europe, where modern medicine and hygiene have reached their highest pinnacle, it has been increasing at the rate of from 25 to 30 years per century.

In the report on National Vitality of the Roosevelt Conservation Commission, a calculation was made from the best data then available that human life could be prolonged by applying knowledge then existing by at least 15 years. Already a substantial improvement has been made since 1908, when this report was written. Personally, I believe that human life could be multiplied three or four or five times, that figure, if we speak in terms of ideals unattainable practically for many generations but which are unattainable simply because of human conservatism and stupidity.

The idea of the Institute is to put to the test the habits of living of the community, so that science gradually becomes the guide of our hygienic conduct rather than tradition. In order that this education should be effected we must first know what science tells us. Our book, "How to Live" is the handbook of the Institute which comprises the composite judgment of you men of the Hygiene Reference Board as to what science tells us. Its conclusions are quite irrespective of whether they conform to the common method of living or not.

The Institute is working on the principle that no man is interested until he finds something the matter with him. Therefore, he needs to be medically examined. You cannot make much impression on people who think they are well; you must first prove they are sick. The Institute has proved that 99 per cent. are more or less short of their maximum efficiency.

I do not think, in spite of the great room for expansion of the Institute itself, that its maximum good will be accomplished by that expansion. I believe its maximum good will be accomplished through making missionaries of the six thousand medical examiners all over the country, so that medical ideals with regard to what constitutes the hygienic life, shall be improved and that these six thousand best physicians may communicate these ideals to their patients until by gradual infiltration they shall have, in the course of a generation, the whole United States

individually aroused to the shortcomings of the ordinary methods of living.

When that is accomplished I do not doubt that we shall get such an interest in hygiene as will be the basis not only for improvement in individual conduct, but for the appropriations, if necessary, for a National Health Department and the health departments of the states, and that public hygiene will go hand in hand with individual hygiene. This is the kind of dividend I want to see from the Institute. (Applause.)

THE TOASTMASTER: That is the way he got me in. (Laughter.) Neither he nor I have financial interest in this Institution, but I want to say a word—I think it is proper in view of the fact I am Chairman of the Board of Directors—that those gentlemen engaged in making up this book "How to Live" should avoid dangers that the gentlemen have fallen into who have painted the dreadful results of the use of alcohol. They, it seems to me, have been so extreme in their statements that they led a good many of the unregenerate who do not believe the extreme statements to disregard everything that is carried in those tracts.

I want to call attention to a simple error in this "How to Live" as it affected a Secretary of mine who, being under my influence, ought to have proper respect for the Life Extension Institute. But he read that book and the thing that struck him more than any statement in it, was the direction that he must have three stools a day (laughter), and that convinced him that the book was not reliable (laughter).

Now I make that suggestion in view of the next speaker—I do not know whether he is responsible for that or whether Irving is—but at any rate I submit it as a humble follower of the Institute in order to avoid that kind of scepticism which grows out of extreme statements.

Dr. Eugene Lyman Fisk is our Medical Director, and he, on the medical side, is the one that has borne the burden, and it gives me great pleasure to ask him to talk ten minutes. (Applause.)

ADDRESS OF EUGENE LYMAN FISK.

Mr. Toastmaster, gentlemen:—

Ten minutes does not mean much to me because there is a man by the name of Einstein who has discovered there is no such thing as time. It is not an entity. You may, however, disagree with him after I get through. As for the dictum that three movements a day is what we call the optimum, I recall that some two years ago we had Mr. Taft to dine with us at the Republican Club, and he made the remark that that was the only thing in the book "How to Live" that he could not subscribe to. He did not say anything about his Secretary, but that opinion seemed to come straight from him.

There has been great need to carry to the public and to the medical profession information as to the real meaning of the Life Extension Institute. We have had the burden of explaining a project that is without precedent. I know of nothing that has ever been created before exactly like the Life Extension Institute. We have had diagnostic clinics and so forth, but they are not fundamentally identical with this enterprise.

The state of mind some of my medical confreres are in is reflected by the remark of a surgeon here in New York who, when he was asked about the Life Extension Institute, said, "Oh, yes, that is the place where Mr. Taft is practicing medicine." (Laughter.)

Another incident occurred where one of our insurance companies' policyholders was offered this service, and in the course of the regular procedure we forwarded a urine container in which to send a specimen of his urine. That container had a small tablet of boric acid as a preservative. Shortly afterward we received a letter, a very intimate letter, "Dear Doc.: I have received the pill you sent me. I have ate it and I feel like a new man. Please send me a full bottle." (Laughter.)

Something like the fellow whom we told that he had an infection of the middle ear. He said, "What do you mean my middle ear? I have only two ears." (Laughter.)

My purpose in these ten minutes to-night, if there is such a thing as ten minutes, is to tell you the ideals of the Institute, and what we have done to try to reach them. I want to differ with Professor Fisher and I hope I may do it pleasantly. (Laughter.)

THE TOASTMASTER: Everybody differs with him. (Laughter.)

DR. FISK: I do not think the fundamental purpose of the Institute is to extend human life. On the way down to New Orleans to a meeting of the American Public Health Association, a very prominent physician asked me, "Do you really think it is worth while to extend human life?" And he fixed me with a glittering eye. I said, "No. You may think so from the business I am engaged in, but" I said, "not unless we can put more into it."

My interest is in extending what I call the health span. The life span does not interest me so much. I do not believe merely in extending life, in trying to draw a man out, to fit him to a Procrustean bed no matter how painful the process. I believe in lifting the handicaps that bring us down prematurely in whatever we are trying to do. Of course, life extension is the by-product of that, but we thought long and critically before we chose the title of the Institute. It has the merit of being definite and as a matter of fact you cannot extend human life unless you improve it.

I may say a few things that seem elementary to some of you, but I think it is necessary in order that it may be understood what we are trying to do, how far we are trying to go, and how much we want you to be with us in that journey.

What are the causes of premature decay, of death itself? I have tried to group them in this way: Heredity, infection, poison, the lack of hormones or of something in the body that keeps our health in equilibrium and keeps us from growing old. We know also that there are such things as mental strain, mental apathy, physical strain, physical apathy, food deficiency, food excess, trauma or accident.

Now, Loeb and others have shown that there is such a thing as natural death in insects. They worked with insects, protected them from infection, from external poison, from injury, and by lowering the temperature of those insects they have increased their lives, in the case of the fruit fly, for instance, 900 per cent. That is a definite instance of an organism that has had its life prolonged by a definite procedure. Man is such a complex creature and so different from the insect that he does not take on the temperature of his environment. You cannot apply that freezing method to man. If we could, we could prolong his life to 1900 years by lowering his temperature about 20 degrees centigrade. It would be kind of a cold deal. No man could sit in a poker game who had his temperature brought down to that point. (Laughter.)

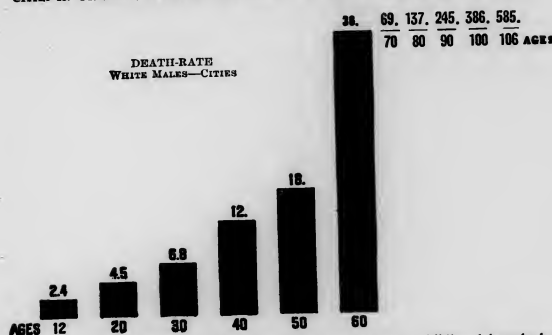
Loeb postulates that death is the end of a chemical reaction. In other words, we at this table are simply chemical reactions and when that is finished our respiration ceases.

But natural death does not occur in man because of the interference of so many external factors I have mentioned. All we can do at the present time in the state of our knowledge is to protect men from these factors and we know many ways in which we can protect him.

In an ultimate sense it is conceivable that life may be lengthened in three ways: (1) Protection against these external destructive factors, (2) control of self-poisoning, and (3) supplying those substances which keep our tissues in equilibrium. In a word, to retard the rate of progress of this chemical reaction, whose final expression is death, is to prolong life. The unfavorable changes that occur at each decade of life are not due to time. I referred to Einstein's theory that there is no time. I have said on many occasions that time is not an entity, but an abstraction, a synthesis of space and motion, that it cannot injure anybody. It cannot touch anybody. It is the things that happen in the course of time that cause us to develop disease, grow old and die.

The most emphatic example of the movement of this chemical reaction is the progress of the death rate. I will show you a chart here that will illustrate that and what I mean by extending the health span.

Death Rate per 1000 Living among White Males CITIES IN ORIGINAL REGISTRATION STATES. U. S. LIFE TABLES CENSUS OF 1910



The above chart shows how old age begins in childhood largely because of neglect of the human body, failure to inspect it and correct its weaknesses as it grows older. Defects accumulate and the line of resistance to disease yields even as early as age 13, long before maturity.

It is shown in Bulletin No. 11, Surgeon General's Office that of the first million men sent to camp, approximately 300,000 among those accepted had physical defects ranging from syphilis and gonorrhea to flat foot (flat foot 176,000); 23,000 had defective tonsils, 27,000 had venereal disease, and only 142 are recorded as having deviation of the nasal septum. Arteries are not mentioned.

In a subsequent bulletin it was stated that about 47 per cent of those examined by the Draft Boards and at the camps had some defect worthy of record. It is evident from these records that many defects or impairments not considered of importance in disqualifying men for service during the war were not even sought for, or at least not recorded. In the British statistics of ages 18 to 41, it was shown that four-fifths of that population had defects worthy of record.

It is interesting to note that the increasing physical disability with advancing years revealed by the Life Extension Institute examinations and the draft examinations, is paralleled by the advancing death rate even in the years supposed to be characterized by youthful vigor.

British statistics (John D. Comrie, LONDON LANCET, Nov. 29, 1919) show that the rejection rate at the age of 18 was 22 per cent; at 23 it was 48 per cent—an increase of 118 per cent; at 40 it was 69 per cent—an increase of 213 per cent over age 18. At age 18, approximately three out of four are fit for active military service; at age 23, only two out of four.

In the British vital statistics the death rate at 20 to 25 was 55 per cent higher than at 15 to 20; at age 35 to 45 it was 140 per cent higher than at 15 to 20.

The figures from the draft in this country so far as they go are consistent with the above.

It is quite evident that a considerable degree of this increase in the death rate with advancing age reflects physical neglect and not a fixed biological law.

(Referring to chart.) You will note how the death rate begins to rise at the age of 12 and that at the age of 40, it is almost 3 times what it is at 20.

I read in a book the other day that during that period of time very, very little change occurs in the average individual. That is the death rate of the white males according to the United States Life tables. It shows a tremendous increase, in the period of time when men are supposed to be in their prime. It shows our opportunity; it shows how brief is that period which I term the health span, which I claim lasts only about ten years, when men are in exuberant health, when they can tackle anything—when if they are called to war they are considered fit to go.

The shock of that call to the front made many men realize that they were not able to go; they knew they had not the physical reserves. If it had not been for that call many would have gone on in their careless way flattering themselves they were young and fit. That is one measure of our opportunity. The draft records showed 30% higher rate of rejection at ages 21-31 than at 21.

The ideals underlying our work are to attack that problem; not simply to seek for the prominent evidences of disease, but for the earliest beginnings, the errors in living, anything that may contribute not only to that increasing death rate but that may be limiting the happiness and well being of mankind.

Periodic physical examination is the fundamental purpose of our work, because that puts this work on the map. You cannot guess a man's needs; you cannot judge by superficial observations; you cannot take a man's own judgment; you must treat him as a machine and go over him critically in this fundamental way.

The counsel we give, based on what we find, is not the fad of any particular man; it does not represent the views of Professor Fisher or myself solely, but all that counsel so far as its fundamental basis is concerned has been checked up by the Hygiene Reference Board. This contact, apart from the book, "How to Live," the manuscript of which we submitted to the whole Board, has been by monthly health letters and a monthly journal. Formerly we sent around the proof of the monthly letter to every member of the Board for criticism. But this proved needlessly cumbersome. What was needed was expert judgment on certain phases of hygiene, exercise, diet, by men on the Board most qualified to consider that particular subject. The entire Board ultimately receive the letters and journal and have an opportunity to criticize or caution.

The theory of our examining service is this, that men shall be trained to make this fundamental preliminary survey of the human body. I think that ideal is a correct one. I think it is a waste of time to have a dozen specialists on a man who is perhaps in average condition. I think this work should be extended all over the country, everybody must have a chance, and we cannot have specialists in every village and every small town in sufficient numbers to do this work. They are not needed. Something is liable to be lost between specialists.

There is a story told to me by Lieut. Gen. Goodwin, Surgeon-General of the British Army. A man was examined by a number of specialists to no

avail, and finally an old lady removed a tape worm from him, showing how things may be overlooked between specialists. The theory of this work is to have a critical fundamental general survey and then determine the type of specialist if any needed on that case.

We find such men can be trained. There are men here to-night who can take the human body and go over it and examine it, not only the eyes and the mouth and the throat, but the rectum and the nervous system and they can learn enough about all those regions to say whether it is necessary for this man to go for a final analysis to some specialist in any one of those regions.

We save time and we get what I think is invaluable, a homogeneous consideration of that man. The specialist is prone to relate trouble to something in his own specialty, the eyes, the prostate gland, the kidney, or some other place.

I do not think any physician should graduate in future years who is unable to make a complete fundamental physical examination. There are many of those in professional practice who are not able to make that examination to-day. They freely confess it. They have been busy on the emergency calls to relieve pain and so forth, but this idea of treating the human body as a machine, to be gone over as an automobile in a garage and every defect to be ascertained and corrective measures applied, is something that is done to a very limited extent at the present time.

We have examined about 125,000 people, divided into about 50,000 life insurance cases, and the balance about equally divided into industrial employes and individual members. I have not yet made separate analyses of the correlation of impairments and so on, which we expect to do in time, but you can see by the work we have had to do we have not had the opportunity yet to get down to that. It costs a great deal of money and it takes an extensive organization to do what we expect to do with the priceless data that we have.

I hope the Metropolitan Life in the coming year will make an analysis of the 50,000 cases we have examined for them and I think the time will come when there will be real testimony from that group. We are establishing a statistical department where there will be a close analysis along this line. I will show you a rough picture of what these examinations have revealed.

In the industries men of an average age of 35 show about 10 per cent. of slight defects, 41 per cent. of moderate defects that require attention of some kind, and about 35 per cent. who require much closer observation. There are five per cent. that are seriously diseased, that need immediate attention, that are in danger.

When you come down to the lower average age, the men in industries at the age of 26 show consistent differences. 10 per cent. of slight defects, 52 per cent. of moderate defects, 27 per cent. of moderate defects requiring close medical observation, and 4 per cent. of advanced disease and 2 per cent. serious menacing disease, and so it runs.

In life insurance, these are cases scattered all over the country, examinations made by all kinds of physicians, the best we could get, but there is still a consistent relationship here, 6 per cent. slight defects, 63 per cent. moderate defects requiring some corrective, 21 per cent. requiring medical supervision, 7 per cent. advanced, and 3 per cent. serious.

That is the picture of the Nation, as it were. It is confirmed by the draft statistics in which 48 per cent. of the men examined were found defective. There have been a great many discrepant figures issued from official sources on that question, but approximately 34 per cent were declined for active military service and of those accepted, a large percentage were found more or less defective and those defects were not negligible; some of them were syphilis, some gonorrhea, focal infection, flat foot, etc.

Those figures need close analysis. I know we had a rugged and splendid army, but of course these men are headed for trouble, as you see here, if these defects are not taken in time and corrected. I can show you here—this is a bad place to show statistics where there is a time limit—but I will do the best I can.

(Dr. Fisk here gave statistics from several charts.)

ANALYSIS OF TYPICAL INDUSTRIAL, COMMERCIAL AND INSURANCE GROUPS.

(Figures derived from more than 10,000 cases.)

	Industrial		Commercial		Life Insurance
	Men Av. Age	Women Av. Age	Men Av. Age	Women Av. Age	Men and Women Av. Age
	34	25	26	26	37
	%	%	%	%	%
No physical impairment reported—no modification of living habits required	0	0	0	0	0
Slight physical impairment or defect requiring observation or hygienic guidance	10	23	10	12	6
Moderate physical impairment or defect requiring some form of hygienic guidance or minor medical, dental or surgical treatment	41	54	52	58	63
Moderate physical impairment or defect, medical supervision or treatment advised in addition to hygienic guidance	35	19	27	21	21
Advanced physical impairment or defect requiring systematic medical supervision or treatment	9	4	9	9	7
Serious physical impairment or defect urgently demanding immediate attention	5	0	2	0	3

ANALYSIS OF IMPAIRMENTS FOUND IN EXAMINATION OF INDUSTRIAL AND COMMERCIAL EMPLOYEES BY LIFE EXTENSION INSTITUTE

These percentages are of the total number of individuals examined. As many individuals had several impairments, the total of the percentages exceeds 100. In other words, these percentages are not mutually exclusive, but overlap.

MINOR TO MODERATE

Personal hygiene errors	86
Urine, slight changes	75
Dietetic errors	69
Nose, throat, bronchial (slight changes)	66
Arteries, slight changes	42
Teeth and gums, slight defects	42
Constipation	33
Circulation slight functional disturbance	30
Digestive tract, signs and symptoms	29
Skin affections	28
Ear defects	27
Anemia	15
Nervous affections, functional	3
Goitre	3
Unclassified	27

MODERATE TO SERIOUS

Urinary changes with important impairments	33
Arteries, moderate thickening	25
Blood pressure, moderate fluctuation	23
Urinary changes with important impairments	23
Nose, throat and bronchial, marked changes	17
Heart, moderate defects	15
Teeth and gums, marked infection	14
Heart, blood vessels and kidney changes	12
Lungs, doubtful signs	9
Blood pressure, markedly increased (above 175)	3
Blood pressure, markedly low (below 100)	2
Heart, advanced defects	1
Tuberculosis, positive signs	.3
Goitre, with symptoms	.07
Nervous affection, marked organic	.07
Gonorrhea	.35
Syphilis	.21

STRUCTURAL DEFECTS

Faulty vision (uncorrected)	53
Posture, faulty	44
Flat foot and other defects	21
Weak inguinal rings	6
Underweight (extreme)	6
Overweight (extreme)	5
Rupture, with truss	3
Rupture, without truss	1

That is a rough picture of the situation as we find it. There is a lot to be done evidently. The ideal classification is yet to come. The classification of these defects is the most difficult thing we could possibly have put up to us. One great industrial surgeon examined 20,000 cases and when it came to classifying them he said he had nothing to compare

them with. The Army records were not sufficient; the life insurance records were not. They were all approached from a different angle. Our angle is the finding of everything there is the matter with a man. It is not a question of eligibility for military service, life insurance, or anything else.

I have nothing more to add to this brief outline except to say I deeply appreciate the co-operation that has been extended to me in the work I have had to do in the Institute. Mr. Ley has been a courageous man throughout. There are many men who will give their money, but men who will give their time as he has done are few. He has a brain of a high earning power, and he is putting a great deal of that at the service of the Institute without salary. His contribution is not in the money he has put up to carry this thing through, but it is in the hope and the enthusiasm and the courage he has given us all in addition to the business direction.

I may say the same thing as to the others. We can never repay our debt to Mr. Taft. He had nothing to gain from coming to this Institute and many men might shrink from the annoyance which might come from having one's name linked with a new institution of this kind.

In the follow-up work and the advertising which has been spoken of, Mr. Lennehan has handled that in a most admirable way, with a high sense of honor and with an extreme sense of responsibility to the Hygiene Reference Board, and to Mr. Taft.

To the Hygiene Reference Board I must extend my thanks for their co-operation. It has been of immense personal advantage to me outside of its value to the Life Extension Institute. I have had flowing in to me priceless information I could not get in any other way.

I hope we have not jarred the Board too much with our popular literature. Of course, therein is stated in popular language much that, to an austere, scientific mind may appear to be inaccurate when it is not really so. We are simply stating in familiar language matters that have much research and sound, scientific authority behind them, and I hope you will try to bear that in mind when anything of this sort rubs you the wrong way. But also give us your frank criticism and we will appreciate it.

I invite closer contact and I hope you will come to the head office whenever you have the opportunity and feel that it is open to you not only for the special work of the Institute, but as a place where you can feel at home. If there is anything you wish to have for use in your own work you are welcome to it and if any suggestions occur to you that will help in our work I hope you will send them freely and frankly.

There is a new era dawning in medicine. It is undergoing radical changes and I think the best elements in medicine must keep to the front. You must not lag back and let the semi-quacks and the charlatans forge to the front. The public must be well served, as well as the medical profession. We have no right to exist if we are not serving the public. The public are awakening and they must be served in this fundamental and practical way.

Medical education has increased in its efficiency a great deal in the past ten years, but it still needs to face around a little more towards the new dawn. The head office of the Institute is open to any scientific worker who wishes to come there and investigate what it is doing and gain any benefit that he can from it. I have made it a practice to open that office for anybody to go there and see the way we keep our records and we welcome any suggestions for improvement; it is an open shop to the scientific world.

I thank you, gentlemen. (Applause).

THE TOASTMASTER: The doctor is in favor of three times (laughter), but as he is the Hamlet of the play I am sure an extension of his time was permissible.

Mr. E. L. Pierce, a Director of the Institute, and the President of the Solvay Process Company, is here. I would be glad to hear from him on the responsibility of the employer. He is one of those who takes direct interest in it, and therefore we would like to hear from him. (Applause).

ADDRESS OF E. L. PIERCE.

Mr. Toastmaster and gentlemen: I am afraid I am one of those directors who do not direct. I do not know exactly why I am a director, but I fell under the wonderful influence of your President, Mr. Ley, and the first thing I knew I was a Director. I congratulate you upon having such a capable, enthusiastic and brainy man for a president.

I have always been interested in this subject of medical examinations and the first mention of the Life Extension Institute came to me from the interest taken in it by my predecessor in the Solvay Process Company, Mr. Hazard. He was keenly interested in the subject. I think that probably, as his assistant, I was his most pronounced critic. The fact that he advocated the use of the Life Extension Institute made me very suspicious. That was of course one of my duties. It was a very serious duty sometimes. I was from Missouri and I had to be shown.

Unfortunately we had not established a connection with the Life Extension Institute and the matter came before me in the early stages of the war, when we were tremendously busy as we were an essential industry. I went into the matter quite carefully, talked it over with Mr. Lennehan, and Mr. Lennehan asked me to take an examination without my connection with the Solvay Process Company being at all known.

Being one of these fortunate fellows who never had a really sick day, whenever I went to medical men and asked for an examination I never got anything that satisfied me. They would look me over and say, "You are all right. We all know about you. You live in our community and we know you are always walking around and you are not ill." I never had a medical man examine me with my clothes off. The only time I had a medical examination with my clothes off was when I was being examined for the United States Army in 1898. They took my clothes off then, but I found the only reason they did it was to get my exact weight and height. (Laughter).

Now, your exceedingly able examiner, Dr. Crawford, gave me what I considered a medical examination. He did not know anything about me, and I was an absolutely unknown individual. He took out that awful list of all those questions that must be answered and when he got through I think I got a medical examination. Now gentlemen, I want to compliment you on that. I have been in all these insurance examinations and passed them and I never had anything like that.

The other day I wanted to take out some more life insurance and curiously I had one of the Life Extension Institute examinations just before. Well, I wish you could have seen the cheery way I went up before the life insurance examiners, having the Life Extension Institute back of me. It was with the greatest satisfaction in the world.

Now, how do you touch the manufacturing industry? Well, it is something that is not fully developed yet. It is a difficult question, but I am going to name perhaps one or two points. In the first place, I think you are of great value to the executives. From a personal standpoint, you have told me how to look after myself. I have been exceedingly proud, or rather I should say first, I have been exceedingly interested in the ratings that you give, this A, B, C, D, business, the "A" that nobody gets, and the "C" that most of us get. (Laughter).

We have been very much interested in that, and I have been especially interested. I felt very disappointed, when I say I never had a day's illness, in getting a B-C. I did not like that. It was neither one nor the other. I felt very proud the second time when I got a "B." I thought I had accomplished something. You have told me a great deal about what I ought to do. They were only little things, but those little things meant a great deal. They have encouraged me to see what I could do with myself.

Now I happen to have two assistants. One of them was always ill. I think he had more illnesses and absences than any man I ever saw. He looked like a good husky, rugged man. The other man seemed very strong. He even went up to the hospital at Rochester to see if there was not something the matter with him. I think he wanted to have an operation (laughter) but they couldn't find anything the matter with him, and they sent him home.

Well, these two fellows came under the Life Extension Institute. The first one I spoke of, who was always off, got a rating of "B"; the other one also got a rating of "B." They were the two men in our institution who got the highest rating of any. The one who was always ill says now that he cannot afford to be ill, and the same with the other one. Now, you have given those gentlemen a standard to live up to, and the moral support they have gotten out of it has been of great value to the business. That is not medical; that may not satisfy you medical men, but it satisfies us.

Now let me say a word about one other thing. I think the first time we enjoyed the services of the Life Extension Institute our payment was not far from \$2,500. A good many men wondered what benefit they got from it and I looked around outside of my own case and these cases I have mentioned, to see what I could find.

I found down the line a technical man of mine who was of a great deal of value to our institution, a man who had a salary of about \$3,500

or \$4,000 a year, a high school graduate, a man with considerable force in an operation, a man who would be exceedingly difficult to replace. That man found, from his examination, that he had some errors in his method of life, his diet, and so forth, which he went to work and carefully corrected under the advice of the Life Extension Institute. I believe that the Life Extension Institute in that particular case has added probably ten years to the efficient life work of that man, and that man will probably always be connected with our institution.

Now there is a very distinct measure. In my own mind I believe that the correction of that one case out of over more than 100, I think, that we examined, was worth the entire expense of the examination. That is the direct benefit I can trace from the one case I know of. I think it is a very important and a good illustration of the value of your work to a manufacturing institution. It is not so much that you are going to benefit all of the men, but there are certain key men who are going to be saved, whose loss would mean the retraining of new men to fill those positions.

Curiously enough, among the best educated of our men whom we asked to take this examination, there was a feeling that the point of view of the corporation was to see if they could not find a good reason to pension those men or lay them off. Now that feeling has got to be overcome. We have tried in our organization to make them feel that the request to take the examination was a measure, a statement of the value the corporation placed on their services. That feeling, of course, can be readily appreciated by the men in the higher positions, but it has been very difficult to get it over to the men farther down the line who are almost equally important in their way.

I think all these problems are going to be worked out by the men interested in the Life Extension Institute. I thank you for having given me your kind attention. (Applause).

THE TOASTMASTER: We have another Director who will be equally careful about the five minutes. His name is Robert W. De Forest, Director of the Institute, Vice-President of the American Red Cross, head of the Metropolitan Art Museum, and I do not know how many other presidencies he fills, but he has fooled lots of people, and I would like to have him speak to you. (Applause).

ADDRESS OF ROBERT W. De FOREST.

Bill Taft, gentlemen: I was a little curious and I may say a little alarmed to know just how he would introduce me. I am a Director in the Life Extension Institute, and in this company I do not want to sail under false pretences. I asked a medical gentleman, a very distinguished medical gentleman, whom I met when I came into the room this evening, of whose connection with the Life Extension Institute I did not know, though perhaps I should have—"What are you doing for the Life Extension Institute?" He smiled and said, "I am giving the Life Extension Institute my name."

Now I am not quite in that category, because I am not only giving the Life Extension Institute my name, but I have given it some of my money, too. However, with the single exception of money differences, I am just about in the position of that gentleman.

You were told by Mr. Ley about what you may call one of the fundamental principles of the Life Extension Institute, that is, it is organized on a business basis. It is organized on a business basis which is intended to return a normal interest to those who put in their money.

Now I believe, not only as a matter of theory but as the result of experience, in philanthropy of this kind being conducted on a business basis. I mean a basis which will pay or which will be expected to pay normal interest to those who support it by their money and I believe in it, as I say, not only in theory but as the result of experience.

My belief is based on two reasons: In the first place, because, unless a philanthropy is on a business basis, unless those who profit by it, and use it, know it is on a business basis, not many of them will continue to use it. I do not believe many of us would come to the Life Extension Institute for the help we have had and can get for our employees and others unless it were on a business basis, because most self respecting, independent American men and women do not wish to receive pure charity. If the Institute were not on a business basis and if they did not know it was on a business basis, I do not believe subscribers would stick, because they would show lack of independence, and also, because they would not consider it effective.

And there is another reason. If philanthropy of this kind is organized on a business basis and is successful on a business basis, there is no real limit to the amount of capital it can secure to extend its philanthropy.

I have taken a fairly prominent part in the organization of two institutions, two philanthropic institutions, which are conducted on a business basis and both have been successful. They have been successful in aiding people who would not have accepted aid except on a business basis and they have been successful in returning normal interest to those who supported them with money, thereby being enabled to secure as much more capital as they needed.

There is the Provident Loan Society. That is a society organized by philanthropic pawnbrokers, intended to relieve the poor of the burden of pawnbrokerage. That was organized on a business basis predicated on a six per cent return to those who put their money in it. It is 26 years since that institution was established. It started with a capital of \$100,000. It has had no difficulty in raising its capital to something over \$7,000,000. It has paid six per cent from the start, and it has done an indescribable amount of good, and if any of you gentlemen want to put up your watches or your shirt studs on a six per cent basis you will, without any loss of self respect, be able to use that particular institution and help me get my six per cent. (Laughter).

Now there is another institution which is a little more analogous to this. That is the National Employment Exchange, organized on the same basis. We sunk pretty much all the capital we subscribed before we

got going. That is now serving the public and will find a situation for any of you gentlemen on a business basis. The Exchange is used by gentlemen who stand as high in the community perhaps as you do, because it is on a business basis.

Organized as the Life Extension Institute is, having gone through these years of trial which Mr. Ley described, perfectly natural in starting any philanthropy of this type, starting in that way, I think, with what we know this evening, you can be reasonably satisfied that the Life Extension Institute has put itself now on a basis of business philanthropy. Speaking as a director and not wishing to take any special credit or any credit at all for what has been accomplished, I think that you gentlemen should perhaps know that the Board of Directors, as a Board, has played a very little part in the success of the Life Extension Institute. Even our chairman here, even our chairman who has done so much by giving his name, and that is a great deal, has done comparatively little in the way of direction. Am I wrong, Mr. Taft?

THE TOASTMASTER: Don't tell the truth. (Laughter).

MR. De FOREST: But you and we and the public are under a great debt of gratitude to the two gentlemen in particular here, Mr. Ley and Dr. Fisk. Except for Mr. Ley's courage and vision and persistence, you and we would not be meeting here tonight; this Institute would have gone under long ago. It is the persistence and courage and the work that has been put upon this Life Extension Institute by these two gentlemen that have made it what it is and, I doubt not, what it is going to be in the future. (Applause).

THE TOASTMASTER: Mr. Ley has spoken of the dinner which was given to which we invited the Presidents of the great insurance companies. We got a good deal of information at that dinner, but the only real aid we got was from Dr. Haley Fiske. I call him a doctor, and he ought to be a doctor, but he is now President of the Metropolitan Life Insurance Company. That meant business. The Third Vice-President and head of the Welfare Department of that insurance company, which has stood by the Life Extension Institute and helped it by being its chief patron, is here tonight. Dr. Lee Frankel. (Applause.)

ADDRESS OF DR. LEE K. FRANKEL.

Mr. Toastmaster, and gentlemen: If it is true that some of the directors here this evening look upon this repast as an Irish dividend, I think some of those connected with this institution on the Hygiene Reference Board feel that we have been rather overpaid for any work we have done for the Institute thus far, and I am just wondering in what way we could make a settlement for what we have received.

I think the day has gone by where any apology has to be made for the work of the Institute, and particularly for its business side. Its value to me is the business point of view for the reason that what I see in the Life Extension Institute is the application of business methods to the problem of health.

The Life Extension Institute is attempting to do for the public health what every business man does in his own enterprise. There is no large corporation, there is no small firm today that would undertake to carry on its affairs, industrially or commercially, without a periodic inventory of stock. In fact, the future conduct of the business, year by year, is altogether dependent upon that annual or semi-annual stock taking. In other words, it is just that application to the business of health that to my mind makes this Institute exceptionally valuable, the fruits of which will only show up in the course of years.

The need for it is apparent. We know very definitely that approximately two per cent of the people of the United States are ill at some particular time, and when I say ill, I mean permanently incapacitated. We know, furthermore, at the present moment not over 75 per cent of the people in any community are receiving any kind of medical treatment when they are ill, much less receiving any attention or consideration when they are well.

We realize that the time has come when there must be a revolution in our methods of medical care and to my mind the Life Extension Institute, if it is doing nothing else, is pointing the way which communities must eventually take for the care of the people whom they serve. If it is wise public policy for the state, as such, to give free education to all citizens irrespective of their condition in the thought of eradication of ignorance, then to my mind it is an equally wise public policy for the state to assume some responsibility for the health of its citizens for the purpose of eradicating illness and disease. (Applause).

I can see this Institute growing. I can see Mr. De Forest getting his five per cent dividends. (Laughter).

I can see this Institute growing as a business affair, but necessarily its activities will be limited to that particular group in the community that is able to pay the fees of the Institute. But this is not going to include the very great bulk of the people who need the same kind of attention that the Institute is now giving and, as I say, I believe the extreme value of this organization and the real dividend that it is going to declare is the example which it is going to show to communities, to states, and to the Federal Government possibly, eventually, that the same kind of work which it is doing for a little group must be undertaken by these communities for the population of the country.

The time is coming, and that probably very soon, when we shall demand of our states that they offer the same type of periodic examination to every citizen in the country today who will avail themselves of it.

Speaking from the standpoint of life insurance companies, I think the one great regret I have, and one that I have never been able to explain by the way, is the comparatively limited number of people who have availed themselves of the offer. I would like to suggest to Dr. Fisk that possibly one of the sciences he ought to teach, either to the Hygiene Reference Board or directly to the executives, is that of psychology. There is something peculiar, I think, in the psychology of the average individual with

respect to a medical examination. I think most men are arrant cowards. I think they are afraid to learn what is the matter with them.

As a matter of fact, we have offered as an insurance inducement this examination without cost. Less than seven per cent of our policyholders have availed themselves of it at the present day. I think it is illustrative of it at the present moment. Why the other 93 per cent did not take it I am not in a position to understand. With every premium notice that is sent out to them, they are reminded of the fact they may have this examination and practically without any cost whatever to themselves. The time must come when we will have 100 per cent rather than 7 per cent.

So far as the benefits and the results from such examination are concerned, our own work with our five or six thousand employes has brought out very clearly just what this means. We know that we find, under compulsory periodic annual examination, impairments, the larger proportion of which, clear up within a year, simply because individuals who have them are advised of them and are recommended certain treatment, and when we come to examine them a year later we find the bulk of the impairments are gone.

In connection with the examination we took a few years ago, we found it was unsatisfactory. We made it compulsory and today we require every employe in our establishment to submit himself or herself to a periodic examination and to medical treatment and care. Probably the best example I can give you is the fact that we have in our employ today approximately 150 men and women all of whom have had tuberculosis, all of whom were discovered to have this disease in its early stages and all of whom after treatment in the sanitarium, are again working in the Metropolitan Life Insurance Company. In other words, there are 150 lives saved by practically the same principles advocated by the Life Extension Institute.

I think it is only fair to say that so far as we are concerned we consider it one of the best institutions we know of for the greater education of the public at large in the proper care of themselves. (Applause).

THE TOASTMASTER: The next speaker is Dr. S. A. Knopf, member of the Hygiene Reference Board, Professor of Medicine in the Phthisiotherapy Department of the New York Post Graduate Medical School. He will speak on the ideals of the Institute. (Applause).

ADDRESS OF DR. S. ADOLPHUS KNOPF.

Mr. Toastmaster and gentlemen: Before I express my ideals for the Life Extension Institute, may I be permitted to relate my experience of the other day when I presented myself under an assumed name at the Life Extension Institute for physical examination. I was treated like anybody else, and as good fortune would have it I was sent to the youngest physician and latest addition to the staff. I think the work was done most thoroughly and there was nothing to criticize. There were perhaps one or two things to suggest which I believe would help the work of the institute. The thought occurred to me then and there that if each specialist, medical

or surgical, whose name is honored by appearing on the Hygiene Reference Board, and as many other medical men and sanitarians of the Board as care to, would submit themselves to such an examination, they might during the process discover something which would add to the efficiency of the work of the Institute and be of invaluable benefit. Thus the Hygiene Reference Board would not only be helpful by making suggestions in the educational work of the Institute, to which it has confined its activities heretofore, but would indirectly, but nevertheless actually, participate in the work of the staff by counsel and advice. I know that Dr. Fisk, the Medical Director of the Institute, is deeply appreciative of any advice or suggestion whereby the high order of the work done by his staff can be made still more effective.

And now a word on the ideals which I cherish for a Life Extension Institute. For a quarter of a century I have been engaged exclusively in tuberculosis work, and as such my dream has always been that there should be many institutions, such as the Life Extension Institute represents, where any man, woman, or child, rich or poor, apparently in good health, could, or better would, be required to go at least once a year to be thoroughly examined. What would be the result if such a boon could be bestowed upon every individual in the United States? Such examinations would lead not only to the discovery of well-nigh every case of incipient tuberculosis, but also to the discovery of many other latent curable and preventable diseases. Such potential patients referred to their family physicians by the Institute, and thus guided, advised, and treated at the right time and in the right place, would mean the saving of many countless lives.

In an audience such as this I need not repeat the well-known fact that tuberculosis is a preventable and curable disease and that the most important part of the tuberculosis problem consists in the early recognition of the malady. If we add to this the next most important part of the problem, the proper and judicious treatment in special institutions, or at home I venture to say that perhaps 90 per cent of all tuberculosis cases would never enter a second or third stage or ultimately die from the disease, but would all be cured in the early stage. An additional and incalculable prophylactic benefit which would be derived through this is that as in the early stage the patient rarely expectorates bacilli, there would be far less dissemination of the disease than if the cases were allowed to reach the second or third stages.

How many thousands of cases of tuberculosis go about undiscovered has been shown during our mobilization period. Our draft boards had to reject no less than 62,000 men on account of tuberculosis and in addition to these 62,000 men, 25,000 recruits who had passed the physical examination of the draft board were returned from camps and cantonments because the military surgeons, on reexamining them, found that tuberculosis lesions had been overlooked by the physicians of the draft board. The draft boards did the work the general staff of the Life Extension Institute is doing daily and the physicians of the camps did what the senior examining physician of the staff does by the examination of suspicious cases.

And now the war is over, we are again at peace and God grant that we may remain so henceforth. The draft boards and the medical boards of the camps and cantonments have gone out of existence, but should the lessons

which the experience of the draft boards and the camp surgeons taught us be lost? Surely not, and the only substitute for the work done by those invaluable institutions during the war is such work as is done by the Life Extension Institute. How many lives could be saved if enough Life Extension Institutes, or similar agencies doing the same work, would be created to go around for rich and poor alike.

Gentlemen, I cannot speak too highly of the ideals of a Life Extension Institute which does work not only by extending life, but actually saving life. Our work is as serious but also as glorious a problem in peace as that of the draft boards and camp surgeons was in war. On the discovery of tuberculosis or any other disease which made the individual unfit for military duty the advice was given to seek medical or surgical help on their return home, and in case of tuberculosis, sanatorium treatment in special institutions or at home under the family physician's guidance was recommended. This is exactly what is done by the medical staff of the Life Extension Institute. It refers the potential patient to his family physician and in the event the disease discovered is of a contagious or communicable character, the patient is instructed in prophylactic measures.

These are the ideals which I have cherished and which I hope will ever guide the work of our Life Extension Institute. Thus it will save countless lives, be an important factor in the combat of tuberculosis, and in the ultimate victory over the "Great White Plague."

THE TOASTMASTER: We now have the pleasure of hearing from Dr. A. D. Blackader, a member of the Foreign Advisory Board and Professor of Therapeutics at McGill University at Montreal. (Applause.)

ADDRESS OF DR. A. D. BLACKADER.

Mr. Toastmaster, Mr. President, Directors of the Life Extension Institute, and gentlemen: At a meeting of this character it behooves a new member to be silent; to listen and learn rather than to speak; any remarks he may make should have the quality of brevity.

My first duty is to acknowledge the courteous letter received a few weeks ago from Dr. Fisher inviting me to take the place on the Advisory Board of my friend Professor Adami whose departure from Canada is regretted by all. I felt the compliment to be a great one and was still more impressed on reading over the list of those who were already actively assisting the Institute. In furthering the aims of such a goodly company, I was certain I could not go wrong. I, therefore, accepted the offer without hesitation, but at the same time with the determination to undertake any duties I might be called upon to perform.

The first duty imposed upon me by your President was to attend this dinner. I have, however, come here not as a duty, but as a pleasure to meet the members of your staff; to learn the history and objects of the Institution, and to note the character and quality of the work it is accomplishing.

After listening carefully to the various addresses which have been made this evening I can say truthfully that I have learned much and I shall go home proud that I am connected with an Institution whose inception and continued progress are an excellent example of the rare combina-

tion of philanthropy with scientific professional work of the highest character carried on upon a sound business basis.

The Members of the Medical Profession in Canada have for the past two or three decades looked to their confrères of the South for much assistance and inspiration. I may add Canadians have always been treated by the profession in this great Republic with much courtesy and kindness, and those of us who have been fortunate enough to be included in the membership of your scientific associations have always appreciated the stimulating atmosphere of your annual gatherings and have left your meetings inspired with the high ideals set before them.

I believe the ideals which this Institute has set before itself this evening have a great practical value not merely in the extension of life but in securing the usefulness and happiness of the years that may be added to its span.

My earliest thoughts on the length of life were associated with visions of tottering cripples, and qualified by the words of the Psalmist—"The years of life are three score years and ten, and if by reason of strength they be fourscore, yet is their strength labour and sorrow." I thought at that time that the Psalmist spoke the truth. Now I question the latter half of the statement, and believe that by taking thought we may add to our lives, and that our added years need not be associated with labour and sorrow.

I may add that I myself have passed by several years the span of three score years and ten. About twenty-four years ago I went to a friend and asked him to make an examination of the condition of my heart and arteries. He did so and told me that my heart was enlarged, my blood pressure was high and that I was working too hard. He ordered me to take a rest or to do much less. The knowledge was depressing, but it did me good. I took life more easily, and in time regained my spirits, and have been working ever since. My hours of work are still long, and have not yet been influenced by the eight-hour-day movement. I think I work as earnestly as any of my confrères, and I work with pleasure. My days, I am thankful to say, are not labour and sorrow, and I do not regard myself as in the same category as Horace's slave with a whip at his back. My work is my pleasure.

The chief reason why medical examinations are dreaded by the laity is fear of the depressing influence which the discovery of any faulty state of the health may exert. For this reason after any medical examination made of a patient, in which signs of trouble have been found, I have always striven to maintain hope while securing great carefulness in the mode of living. A patient must never lose hope, for without hope one loses one's grip on all the strings of life. The examinations made by this Institute will be of inestimable value if they impart courage as well as the knowledge of how to put on the proper brakes as the individual slides down the years after passing fifty. In many cases such an examination may dissipate the dread that hangs over many men of threatening disease and death. In not a few, this depressing dread is but the result of a figment of the imagination; in others it is a true sword of Damocles. Nevertheless in every case

a medical examination should inspire hope and courage, and so far as may be possible it should aim to restore the joy of life and the joy in work, which in my opinion is a great power in the extension of life's span.

About twenty years ago Sir William Osler gave an address in which he emphasized the importance of every one having yearly a complete medical examination after he has reached the age of fifty. Your Institute I am sure emphasizes the value of this advice. For business men, carrying out great projects, the desirability of such an examination will, I am sure, be emphasized by every physician. One of the sad pictures that is recalled by my memory is that of Rhodes dying of cardiac disease in middle life, with his work unfinished and his plans of forming a state or empire in South Africa cut short by heart failure, and exclaiming to a friend, "So much to do; so little done." If this Life Extension Institute can lengthen out the span of life to the great workers and thinkers of our age it will accomplish much.

My work in Montreal has of late years been chiefly in connection with children. As Canadians we all recognize how much has been done in America for infant welfare. That the infant should be well born is the first step in the extension of life. The hygienic development and growth of the child is the second step. The youth will then enter life with a sound foundation on which may be built a healthy manhood. We all recognize the great latent reserve power to endure strain possessed by every healthy man; with advancing years and a gradually lessening reserve comes the necessity for moderating the strain. If the Life Extension Institute can so extend its work as to supply all men with the knowledge of how to conserve this gradually diminishing reserve it will accomplish good of inestimable value.

Permit me, Mr. President, again to express my thanks to you and your Board of Directors for your courtesy in extending to me the invitation to be present to-night, and to say in closing how heartily I am in accord with the objects and work of this Institute, and to promise you again all the assistance I can render the Institute in my position as a Member of your Foreign Advisory Board.

TOASTMASTER: I now call on Dr. Ravenel, Professor of Preventive Medicine and Bacteriology of the University of Missouri, to tell us about the relationship of the Laboratory to Public Health. (Applause.)

ADDRESS OF DR. MAZYCK P. RAVENEL.

Mr. Chairman and gentlemen: It is always dangerous to ask one to speak on his specialty. One is apt to regard his own baby as much more worth while and wonderful than all other babies. I will, however, attempt to keep within bounds and give facts uncolored by preferences or prejudices.

From whatever point we view the prevention of disease and the saving of life—whether it be the control of the acute affections spread by contact, of those carried by insects, of those due to impure water, milk or foods, or of those depending on some deficiency in nutrition—the laboratory is our supreme guide and dependence.

If we consider those diseases of obscure origin such as cancer, diabetes and Bright's, the incidence of which seems beyond our control, but in spite of which lives of those affected can be prolonged and saved by early diagnosis—the laboratory is the court of final resort. Without laboratory facilities the most skillful physician or surgeon can do no more than suspect the nature of these maladies in the early stages—there are no pathognomonic symptoms.

Time does not permit more than a reference to what the laboratory is doing to lessen disease and lower mortality. I mention only as examples of its scope, the examination of water and milk supplies, the early and certain diagnosis of diseases, the detection of bacterial carriers, the production of vaccines and specific anti-sera, the measuring of immunity as in the Schick test, the various blood examinations, as the detection of malaria carriers, and the complement fixation test, which, in syphilis, not only makes diagnosis certain, but also guides our treatment.

I liked particularly the statement made by Dr. Fisk that he laid stress on training his men in physical examination of the entire body. I have long held the opinion—with which some of my friends disagree—that the laboratory has probably injured the physician. The physician of to-day calls to his aid the chemist, the bacteriologist, the physicist. From their reports he makes his diagnosis. The end results are undoubtedly better, but when I remember the giants of the past—Louis, who differentiated the fevers without even the clinical thermometer; Rayer, whose classic monograph on glanders has never been surpassed; Bright, who described the disease which bears his name; Bretonneau, whose description of diphtheria is even to-day a model; Jenner, who gave us vaccination against small-pox; and in our own country—Oliver Wendell Holmes, who proved the contagiousness of puerperal fever; Dickson, who taught that pneumonia was communicable; Nott, who marshalled facts to support his belief that the mosquito carried yellow fever;—and many others, all working with nothing we would to-day consider even as approaching proper laboratory facilities—I cannot but wonder if we have not lost something of the faculties of exact observation and accurate interpretation in which our predecessors so excelled.

Until the very recent past our conception of disease prevention has been wrong;—our practise at the present is largely wrong, controlled by obsolete and obsolescent laws, based on outgrown beliefs and a public opinion which has not yet been educated up to the facts. We have allowed disease to force itself on our attention before putting preventive measures into effect. Cases in the early stages—often the most dangerous period in the acute contagions—have gone unhindered and unrecognized, carriers and mild cases have escaped notice. Many persons with chronic diseases of the kidney, heart and blood vessels, go to the death chamber before their condition is recognized. Cancer becomes inoperable or generalized before aid is sought. Just as long, and to the same degree, as we cling to these old methods, will we fail in our object, and in our duty to humanity. We must go out after disease, find and combat it before it becomes so obvious that we are forced to give it attention.

The Institute has clearly recognized this principle from the first, and emphasized it in the insistent demands for periodical examinations of those who seem to be in perfect health. The practise is sound, and to it the great success of the Institute is doubtless largely due. It has done more to teach the new ideals than any other agency within my knowledge.

Oliver Wendell Holmes said he learned three things in Paris;—"Not to take authority when I can have facts; not to guess when I can know, and not to think a man must take physic because he is sick." The Medical laboratory has confirmed the wisdom of these statements—it has confounded authority, it has substituted knowledge for guess-work, it has taught us when medicines should be given, and when not, as well as what medicines should be used with reasonable assurance of producing effects. (Applause.)

THE TOASTMASTER: Mr. Fisher, who has been pulling the strings of this occasion, has not had as much experience in banqueting as your Chairman. (Laughter.) There may be men who have banqueted more than I have, but I do not know who they are, but I know something about after dinner speaking, and when he presented to me a list which included every gentleman present whom he would be glad to hear from—and I have figured out 140 minutes, which you can double, making 280 minutes, or treble, which would make just so much more—I knew where he would land, and that is where we have landed.

Now, he wants me to say that he is very apologetic, that he is very sorry, and he wishes to apologize to all of us that we cannot hear from each of us (laughter), but we have reached twenty minutes to twelve, and in his book of "How to Live" he recommends early going to bed, and he thinks we ought to adjourn.

So, following his judgment, I declare this here Legislature adjourned. (Laughter and applause.)

APPENDIX.

As Mr. Taft has so felicitously expressed it, certain difficulties arose in carrying through the program to include addresses by all of the members of the Hygiene Reference Board who were present. Desiring to have the thoughts of those who could not be reached on the program we requested a brief expression of their views for inclusion in the report of the dinner. In response the following memoranda were received up to the date that our material went to press:

A neglected mouth and decaying teeth are prolific sources of disease producing bacteria. Neglected teeth and unhygienic mouth soon lead to imperfect mastication of food. With the nerve or pulps of the teeth exposed, the child quickly bolts its food. Lack of use of the teeth and muscles of mastication soon impairs the whole facial structure which in a young child is in a process of development within and without.

The materials necessary for growth of bone and other tissue is dependent upon a good blood supply. This supply is checked through lack of use, consequently a mild form of blood stoppage about the mouth and within the nose results in malformed and inharmonious lines of the external face. With diseased teeth there cannot be thorough mastication of food; without thorough mastication there cannot be perfect assimilation; without assimilation there cannot be effective nutrition; without nutrition who can be efficient or in good health?

With so concise a summing up of some of the evils attendant upon the lack of care of the mouth and teeth during childhood, we readily appreciate how great and vital is our responsibility to these children. We are in duty bound to provide some means for their protection against their ignorance and the lack of interest on the part of the parents. What is the use of treating hundreds of children in our hospital clinics who suffer as a result of lack of care in Oral Hygiene when a little provision through education and training at an early age would prevent so much. A remedy will be found in a closer co-operation between the Departments of Health, School Nurses and Dentists within every community and the employment of trained Dental Hygienists where there are a great number of children to be cared for.

Instruction for children in care of mouth should appeal to their sense of beauty, as shown in clean and regular teeth. Children are not easily impressed with negative stories of possible ailments through neglect, but are stimulated to effort and pride in care of the teeth, when an appeal is made to beauty and strength and usefulness and ultimate personal success in all their endeavors. When they co-operate in the care of their teeth, they begin to realize that their own bounding vitality, clean teeth and beauty of facial harmony are the results of the daily drill and upon this they grow.

There must be no paradoxical gaps between what we believe and preach and teach, and what we practice. The fight for the best environment for the child at school and elsewhere must go on. We are encouraged by the results achieved within the past few years as seen in the smaller number of children attending the clinics of the hospitals for treatment of diseased teeth, diseased tonsils and enlarged cervical glands. Still there remains much more to be done. Each year the knowledge and experience and teaching of the past must be reiterated and explained anew to the school teachers, social service workers, nurses and even the examining physicians. We have fought alcoholism, and are fighting tuberculosis and strenuously urge better hygiene for child and adult as a preventive measure against disease and physical deficiency.

The children in a few well organized schools have benefited by the blessings of careful physical inspection to an extent measurable by careful statistics

which are beyond question. Now the time is ripe to plan some means whereby all the children within the commonwealth shall be protected in every respect as well as the favored few.

All our cities are not so fortunate as Boston with its Forsythe Infirmary where thousands of the city's children are dentally cared for, or procure such splendid clinics as are found in the Dental schools and more recently in hospitals and dispensaries. If the great, good and physical benefits found here could be extended to every community in the State, we feel confident that the future citizens would be more efficient in mind, body and estate.

Our vision of this great good to all would find every child of school age under physical supervision and treatment, not from any sentimental or philanthropic or charitable reason, but on the clear ground of the inherent right of the child to be protected against its own ignorance or its parents' neglect. If I could, I would send into every hamlet wherever there was a schoolhouse, a complete traveling dental outfit with a staff of workers comprising a dental surgeon, a skillful dentist to fill teeth, a trained dental hygienist to clean teeth and instruct all concerned, including teachers, parents and children. This Traveling Dental Hospital would go from place to place throughout the year when and where traveling was best.

This care of the teeth and instruction in personal hygiene would soon be reflected in fewer cases of disease and physical defects as shown in our clinics. There would be fewer applicants to our hospitals and institutions for child welfare. This is merely a suggestion for the future. What it would mean to the state in better and more efficient men and women who shall estimate?

DR. GEORGE N. WRIGHT—*Professor of Clinical Dentistry—
Harvard Medical School.*

"The principal things I had in mind to say were three:

1. That the Life Extension Institute was a splendid illustration of the advantage and value of well organized team work in the investigation of cases of disease.

2. That the great mass of data which you are rapidly gathering would have an inestimable scientific value in throwing light upon the question of morbidity, a subject which has been little investigated and which is fully as important as or even more important than the question of mortality, as mortality is generally due to morbidity.

3. I had in mind to call attention to the great service that Professor Irving Fisher, a layman, has rendered to the country in the organization of the personnel of the Life Extension Institute with its various committees. Of course I know that you and Mr. Ley have done nearly all of the work and no one could question that the success of the Institute was primarily due to your effort.

One thing I also had in mind to add, namely, the hope that the work of the Institute would aid in bringing about such an interest in the matter of periodical medical examinations that ultimately the state may be induced to undertake this work and offer to every citizen an opportunity for free medical examination at least once a year. This I have advocated for many years and I begin to entertain a real hope that some day we may become sufficiently civilized to take as good care of our human population as we now take of our cattle and pigs."

(Signed) J. H. KELLOGG, M.D.,
*The Battle Creek Sanitarium
Battle Creek, Mich.*

"The lesson which Nature teaches the biologist is that prolonging of life beyond the age of effectiveness is a perversion. When a man's work is done, he should be allowed to depart and not remain a burden on Society to carry. "On the other hand, there can be no question that it is biologically desirable that persons in active life should defend themselves, and be defended by organized society, against enemies—especially parasitic organisms and poisonous

and mechanical agencies that diminish effectiveness. It takes no more food to maintain or space to shelter a physically and mentally highly effective person than an ineffective one, but their return to Society is very different.

"While a fight against parasitic enemies must continue indefinitely, it is no less important to strengthen internal defenses, both by maintaining in the body the requisite army of leucocytes but also by introducing the mores of preferential mating and breeding of strains of humans which have a naturally high resistance and the repression of the prolificacy of the less resistant strains. A nation that is blind to the difference in social value and the hereditary qualities of different families is headed for disaster."

(Signed) C. B. DAVENPORT,
*Director, Carnegie Station for Experimental
Evolution; Director, Eugenics Record Office.*

"I have your letter of December 12th and wish to add my letter to those which I am sure will come from every other person present at the very pleasant dinner given by the Life Extension Institute expressing appreciation of the very interesting and practical talk which you gave upon the work of the Institute. I thought the whole program was very well planned and worked out. I was particularly impressed by your distinction between a 'life span' and a 'health span.' The latter was a phrase I had not heard before and you drew a very vivid picture of it.

As for myself, I had nothing to say which needed saying and only agreed to speak because, in that matter as in others in the past, I have wanted to do anything which would facilitate the success of your important project.

As I have said to you before, those of us who have left an assured status and gone into some doubtful pioneer experiment can appreciate more keenly than do others what it meant to you five years ago to tackle this big job. I sincerely congratulate you upon the solid progress which you have achieved."

(Signed) W. F. SNOW, M. D.
*General Director, American Social
Hygiene Association, Inc., New York City.*

"The most important emphasis to-day in health education is periodic medical examinations. It is to the individual what the health survey has been to the community. It secures the facts in the case upon which health education is to be based. If this practice of having people take an examination at least annually could become quite general and if it was reasonably followed up by the individuals thus examined a remarkable change would be seen in the reduction of morbidity and mortality, especially in middle life.

We are greatly indebted to the Life Extension Institute for pioneering this movement upon such a practical and efficient basis."

(Signed) GEORGE J. FISHER, M. D.
*Deputy Chief Scout Executive
Boy Scouts of America.*

"Your letter of December 12th is received. I was very glad indeed that you did not reach me on your program the other evening. I did not go prepared to say anything, and I can assure you was not disappointed when not called upon. If I should have discussed the subject at all it would have been along the lines of adopting the methods and the work which have been so well inaugurated and, I am happy to say, established, under your splendid direction, as a part of the public health program of the states and counties.

My county health officers last year did three thousand examinations, and next year we shall reach five or six thousand.

I want to congratulate you upon the delightful and stimulating meeting. Nobody was the least bit tired, and Mr. Taft, as you well know, kept the men in excellent humor during the whole evening. It was one of the most delightful dinners I ever attended, and I cannot tell you how much I appreciate being associated with the Reference Board."

(Signed) W. S. RANKIN, M. D.
State Health Officer, North Carolina.

In the very interesting discussion which has just taken place no one has mentioned how extremely important to the diagnosis and treatment of cancer is the routine examination of people in apparent health. The whole future success of the operative treatment of cancer depends upon early diagnosis. Only a very small proportion of persons suffering from carcinoma of the stomach or rectum, for instance, present themselves for examination sufficiently early to permit of a curative operation. A very large proportion of women with cancer of the uterus are seen too late for permanent cure to be effected by any sort of operation. Many of these people have few or no symptoms which would lead them to think that they have a malignant growth. They do not go to a physician until they begin to feel seriously ill, and usually by that time it is far too late for a cheerful prognosis.

For some reason physicians do not interest themselves in making routine examinations of apparently healthy people, and not a few of the persons suffering from cancer whom I have seen in the last few years at the laboratory of the Crocker Cancer Research Fund had been seen by physicians and been told that there was nothing the matter with them.

I hold that it is one of the functions of the Life Extension Institute to educate the medical profession, however resistant it may be to instruction from such a source. Another equally important function is to diagnose these early tumors and refer the patients to surgeons for operation when necessary. I look forward to the time when the surgery of cancer will be a speciality and only specially trained men will be permitted to operate. If the patients reach such specially trained men soon enough the present menace of cancer will be much diminished. Much has already been done by the Society for the Control of Cancer to give widespread publicity to the subject of cancer and its dangers, but much more can be accomplished by the application of the methods of the Life Extension Institute.

FRANCIS CARTER WOOD, M. D., Director of
Cancer Research at Columbia University.

NOTE:—The Life Extension Institute is giving especial attention to Cancer prevention and is sounding this note in its literature and in its advertising.

HYGIENE REFERENCE BOARD OF THE LIFE EXTENSION INSTITUTE, Inc.

IRVING FISHER, *Chairman*
PROFESSOR OF POLITICAL ECONOMY, YALE UNIVERSITY

PUBLIC HEALTH ADMINISTRATION

- HERMANN M. BIGGS, M.D., Commissioner of Health, State of New York.
RUFERT, BLUD, M.D., Former Surgeon-General, U. S. Public Health Service.
H. M. BRACKEN, M.D., Secretary, Board of Health, State of Minnesota.
ADMIRAL WILLIAM C. BRANSTED, Surgeon-General U. S. Navy; President American Medical Association.
OSCAR DOWLING, M.D., President, Board of Health, State of Louisiana; Professor of Hygiene, Tulane University, New Orleans.
HAYEN EMERSON, M.D., Professor of Hygiene and Preventive Medicine, Cornell University.
JOHN S. FULTON, M.D., Secretary, Department of Health, State of Maryland.
S. S. GOLDWATER, M.D., Director, Mt. Sinai Hospital, New York.
MAJ.-GEN. WILLIAM C. GORGAS, Surgeon-General, U. S. Army. (Retired).
CARVIN W. HENDRICK, Chief Engineer, City of Baltimore.
J. N. HURTY, M.D., Secretary, Board of Health, State of Indiana.
MISS JULIA LATHROP, Chief, Children's Bureau, U. S. Department of Labor, Washington, D. C.
ALAN J. McLAUGHLIN, M.D., Assistant Surgeon-General, U. S. Public Health Service.
W. S. RANKIN, M.D., Secretary and Treasurer, Board of Health, State of North Carolina.
JOSEPH W. SCHERERCHESKY, M.D., Assistant Surgeon-General, U. S. Public Health Service.
GEORGE C. WHIPPLE, Professor of Sanitary Engineering, Harvard University.

MEDICINE AND SURGERY

- LEWELLYS F. BARKER, M.D., Professor of Medicine, Johns Hopkins University.
GEORGE BLUMER, M.D., Dean, Yale Medical School.
L. DUNCAN BULKLEY, M.D., Senior Physician, New York Skin and Cancer Hospital.
GEORGE W. CRILE, M.D., Professor of Surgery, Western Reserve University.
DAVID L. EBSALL, M.D., Professor of Clinical Medicine, Harvard University.
REAR-ADMIRAL CARY T. GRAYSON, M.D., U. S. Navy.
SEALE HARRIS, Professor of Medicine, University of Alabama.
S. ADOLPHUS KNOWL, M.D., Professor of Medicine, Department of Physiotherapy, New York Post-Graduate Medical School.
J. H. KILLOGG, M.D., Superintendent, Battle Creek Sanatorium.

- WILLIAM J. MAYO, M.D., ex-President of American Medical Association.
ROBERT TUNSTALL TAYLOR, M.D., Professor of Orthopaedic Surgery, University of Maryland; Surgeon-in-Chief, Kernan Hospital for Crippled Children.
VICTOR C. VAUGHAN, M.D., Assistant Surgeon-General (Reserve), U. S. Public Health Service; Dean, Department of Medicine and Surgery, University of Michigan; ex-President, American Medical Association.
WILLIAM HOLLAND WILMER, M.D., Professor of Ophthalmology, Georgetown University, School of Medicine.
HUGH HAMPTON YOUNG, M.D., Associate Professor of Urological Surgery, Johns Hopkins University.

CHEMISTRY, BACTERIOLOGY, PATHOLOGY, PHYSIOLOGY, BIOLOGY

- JOHN F. ANDERSON, M.D., Lecturer on Personal Hygiene and Sanitation, Rutgers College; formerly Director, Hygienic Laboratory, United States Government.
WALTER B. CANNON, M.D., Professor of Physiology, Harvard University.
RUSSELL H. CHITTENDEN, Professor of Physiological Chemistry, Director, Sheffield Scientific School, Yale University.
OTTO FOHLIN, Professor of Biological Chemistry, Harvard Medical School.
M. E. JAFFA, Professor of Nutrition, University of California.
E. V. McCOLLUM, Ph.D., Professor of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md.
LAVANETTE B. MENDEL, Professor of Physiological Chemistry, Sheffield Scientific School, Yale University.
MAZYCK P. RAVENEL, M.D., Director, Laboratory of Hygiene, Professor of Preventive Medicine and Bacteriology, University of Missouri.
LEO F. RETTGER, Professor of Bacteriology, Yale University.
M. J. ROSENAU, M.D., Professor of Preventive Medicine, Harvard Medical School.
EDWARD C. ROSENOW, M.D., Professor of Experimental Bacteriology, University of Minnesota and Mayo Foundation.
WILLIAM T. SEDGWICK, Professor of Biology and Public Health, Massachusetts Institute of Technology.
HENRY C. SHERMAN, Professor of Food Chemistry, Columbia University.
THEODORE SMITH, M.D., Director, Division of Animal Pathology, Rockefeller Institute for Medical Research.

HYGIENE REFERENCE BOARD—Continued

CHARLES W. STILES, M.D., *Assistant Surgeon-General (Reserve), U. S. Public Health Service.*
A. E. TAYLOR, M.D., *Professor of Physiological Chemistry, University of Pennsylvania; Assistant to the Secretary of Agriculture.*
WILLIAM H. WELCH, M.D., *Dean, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md.*
C. E. A. WINSLOW, "Anna M. R. Lauder" *Professor of Public Health, Yale University; Curator, Museum Natural History, New York.*
FRANCIS CARTER WOOD, M.D., *Director of Cancer Research, Columbia University.*

STATISTICS

HENRY W. FARNAM, *Professor of Economics, Yale University.*

EUGENICS

ALEXANDER GRAHAM BELL, M.D., *Board of Scientific Directors, Eugenics Record Office.*
C. B. DAVENPORT, *Director, Carnegie Station for Experimental Evolution; Director, Eugenics Record Office.*
WINFIELD SCOTT HALL, M.D., *Professor of Physiology, Northwestern University Medical School, Chicago, Ill.; Medical Director, Board of Temperance and Moral Welfare, Presbyterian Church of U. S. A.*

MENTAL HYGIENE

THOMAS W. SALMON, M.D., *Medical Director, National Committee for Mental Hygiene, New York.*

ORGANIZED PHILANTHROPY

MRS. ELMER BLAIR, *Chairman, Public Health Department, General Federation of Women's Clubs.*
LEE K. FRANKEL, Ph.D., *Third Vice-President and Head of Welfare Department, Metropolitan Life Insurance Company.*
WICKLIFFE ROSE, *Director, International Health Commission.*
WM. JAY SCHIFFELIN, *Chairman, Executive Committee, Committee of One Hundred on National Health.*
LOUIS LIVINGSTON SEAMAN, M.D., *President, The China Society.*
WILLIAM F. SNOW, M.D., *General Secretary, The American Social Hygiene Association, Inc.*
LAWRENCE VETTER, *Secretary and Director, National Housing Association.*

EDUCATIONAL

W. H. BURNHAM, *Professor of Pedagogy and School Hygiene, Clark University.*
W. A. EVANS, M.D., *Professor of Sanitary Science, Northwestern University Medical School; Health Editor, Chicago Tribune.*
NORMAN HAYGOOD, *Journalist.*
FREDERICK R. GREEN, M.D., *Secretary, Council on Health and Public Instruction, American Medical Association.*
J. N. McCORMACK, *Chief Sanitary Inspector, Board of Health, State of Kentucky.*

M. V. O'SHEA, *Professor of Education, University of Wisconsin.*

HARVEY W. WILEY, M.D., *Director, Bureau of Foods, Sanitation and Health, Good Housekeeping Magazine.*

INDUSTRIAL HYGIENE

JOHN B. ANDREWS, *Secretary, American Association for Labor Legislation.*
THOMAS DARLINGTON, M.D., *Secretary of American Iron and Steel Institute.*
GEORGE M. KOBER, M.D., *Dean, Medical School of Georgetown University.*
MISS JOSEPHINE GOLDMARK, *Publication Secretary, National Consumers' League.*

MOUTH HYGIENE

ALFRED C. FONES, D.D.S., *Chairman, Dental Committee, Bridgeport Board of Health.*
GEORGE H. WRIGHT, D.D.S., *Professor of Clinical Dentistry, Harvard Medical School.*

PHYSICAL TRAINING

WM. G. ANDERSON, M.D., *Director, Gymnasium, Yale University.*
GEORGE J. FISHER, M.D., *Deputy Chief Scout Executive, Boy Scouts of America.*
R. TAIT MCKENZIE, M.D., *Professor of Physical Education and Director of the Department, University of Pennsylvania.*
DUDLEY A. SARGENT, M.D., *Director, Gymnasium, Harvard University.*
THOMAS A. STORY, M.D., *Professor of Hygiene, College of the City of New York.*

FOREIGN ADVISORY BOARD

CANADA

A. D. BLACKADER, M.D., *Professor of Therapeutics, McGill University, Montreal.*

CHILE

CARLOS FERNANDEZ PENA, M.D., *President, Association of National Education; Secretary, National League Against Alcoholism.*

ENGLAND

SIR THOMAS OLIVER, *Professor of Physiology, Durham University.*
JOHN GEORGE ADAMI, M.D., *Vice-Chancellor, University of Liverpool.*

FRANCE

ARMAND GAUTIER, M.D., *Professor of Chemistry, Faculty of Medicine, Paris.*

ITALY

LEONARDO DIANCCHI, *Director, Neurological Clinic, Naples; Deputy to Parliament.*

JAPAN

PROF. DR. S. KITASATO, *Chief of the Kitasato Institute for Infectious Diseases, Tokyo.*

RUSSIA

IVAN PETROVIC PAVLOV, *Professor of Physiology, Military Academy of Medicine, Petrograd.*

MSH # 22447

MSH # 22447

**END OF
TITLE**